



# Communicator



## January 2014

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News You Can Lose

and Much More!



# Happy New Year

**The January 2014 Newsletter of the Surrey Amateur Radio Club**  
**Next General Meeting January 8<sup>th</sup>**



**SURREY  
AMATEUR RADIO CLUB**

#### TELEPHONE & ADDRESS

(604) 591-1825  
12144 - 57A Avenue  
Surrey, BC V3X 2S3  
SARC@ve7sar.net

#### EDITOR

John Schouten  
SARCcommunicator  
@outlook.com

#### WEBMASTER

Hui Yee VE7YXG

#### QSL Manager

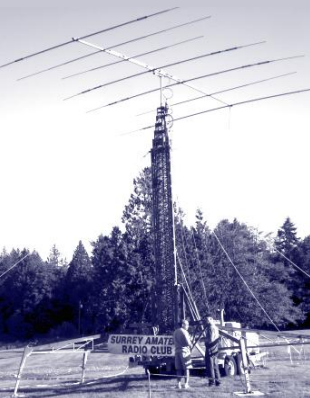
Nelson Eisel VE7NAE

#### VIA THE WEB

[www.ve7sar.net](http://www.ve7sar.net)

The **SARC Communicator** is published monthly for members of the Surrey Amateur Radio Club.

SARC maintains a website at [www.ve7sar.net](http://www.ve7sar.net) that includes club history, meetings, news and other information.



## Wasn't That A Party?



#### Clockwise from the top left:

Guests Marvin Hunt MLA and his wife Ruth in conversation with SARC President John Brodie and his wife Heather. Samoan Dancer Toese' Tusitala provided a lively start to the event. Elizabeth Gilchrist VE7ELA serenaded the attendees on trumpet. Marvin Hunt MLA, a strong supporter of Amateur Radio, addressed the attendees and thanked SARC and SEPAR members for their service.

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Dennis Jackson VE7DGG

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RAC News  
January SARC Calendar

	SEPARS Net	SARC Net
1 <sup>st</sup> Tuesday	Drew VA7DRW Jay VE7OFH Standby	Brett Garrett VE7GM
2 <sup>nd</sup> Tuesday	Dixie VA7DIX Alan VA7BIT Standby	Jinty VA7JMR
3 <sup>rd</sup> Tuesday	Rob VE7CZV	Anton VE7SSD
4 <sup>th</sup> Tuesday	Peter VE7PGX Dixie VA7DIX Standby	John VA7XB
5 <sup>th</sup> Tuesday	Jinty VA7JMR	Elizabeth VE7ELA
Want a turn at Net Control? Contact the SARC Net Manager <a href="mailto:VE7CZV@separ.net">VE7CZV @ separ.net</a>		

## CLUB EXECUTIVE 2013-2014

#### PRESIDENT

John Brodie VA7XB

#### VICE PRESIDENT

Brett Garrett VE7GM

#### SECRETARY

Rob Gilchrist VE7CZV  
(also Net Manager)

#### TREASURER

Scott Hawrelak VE7HA

#### DIRECTORS

John Schouten VE7TI  
(Communicator Editor)

George Merchant  
VE7QH (Repeaters)

Bill Little VA7ZBL  
(Membership)

Bill Gipps VE7XS

**SARC** hosts an Amateur Radio net each Tuesday evening at 8 PM. Please tune in to the VE7RSC repeater at 147.360 MHz (+600 KHz) Tone=110.9, also accessible on IRLP node 1736 and Echolink node 496228. On UHF we operate a repeater on 443.775MHz (+5Mhz) Tone=110.9 and EchoLink Node 1737





**From the top left:**

Heather and John Brodie, SARC Webmaster Hiu Yee, and Field Day Planning Chief Brett Garrett.

Part Speer donated a Sony Soundbar that was won by Stan Williams VA7NF. Pat congratulates Stan on his new acquisition.

President John Brodie VA7XB presents the 'SARC Year in Review', and what a year it was, highlighted by a successful Fox Hunt, a First place Field Day win in 3A and numerous high contests standings.

Nell Wrotniak gives accolades to Jim Smith VE7FO, another of our contest trainers and a Field Day guru. Behind Nell are husband Ralph, Hiu Yee and Rick Law.

Master of Ceremonies Bill Gipps VE7XS, at the mic.

The winner of the handheld radio was Bhim Sen Nair VA7BIM... We expect to hear you on the Net now Bhim.

And finally, a special acknowledgment to Jinty Reid VA7JMR, who was the party organizer, and frequently goes out of her way to pick up and enable our special needs members to attend meetings and functions.

## DOWN THE LOG...

### SARC Monthly Meetings

2<sup>nd</sup> Wednesday (Sept-Jun)  
1900 hrs local at the Emergency  
Management BC PREOC,  
14275 96th Avenue, Surrey, BC

### Weekly Club Breakfast

Friday at 0800 local  
ABC Country Restaurant at  
600 - 7380 King George Blvd.  
Surrey

### SARC Net

Tuesday at 2000 hrs local  
on 147.360 MHz (+) Tone=110.9

### SEPARS Net

Tuesday at 19:30 hrs local  
on 147.360 MHz (+) Tone=110.9

### Announcements & News

SEPARS Monthly Workshop  
Third Thursday, 1900-2130 local  
14923-64th Ave, next to Firehall  
#9, Surrey.

### SEPARS Training

Fourth Saturday, 0830 local,  
Firehall #1, 88 & 132nd Street,  
Surrey

### On the Web

[ve7sar.net](http://ve7sar.net)

Between newsletters, watch your e-mail for announcements of events, monthly meetings and training opportunities. These announcements can also be found on our web page, or via:

### Twitter

[@ve7sar](https://twitter.com/ve7sar)

Photos  
[Web Albums](#)

Introducing...

# SARC's 2013 Amateurs Of The Year



## Brett Garrett VE7GM

Presented by Jim Smith VE7FO

I'm sure that everyone here must be aware of the Club's outstanding accomplishment this year of attaining the top Canadian score in the ARRL Field Day 3 transmitter class.

Field Day score listings on the ARRL web site go back to 1999 with a gap in 2000-2001. They show that the record score for Canada in the 3A Category is 7626, attained by VE3CJ/VE3HB in 2010. Our score of 7262 puts us in number two position in the record books, only 354 points behind. How did we get to this position? Well, it didn't just happen all on its own.

If there is one person who we could say was most responsible for our success at Field Day this year, it would be the individual we are about to honour with the Surrey ARC Ham Of The Year Award.

Certainly, there were other major contributors but the leader is the one who loses the sleep, worrying that everything has been thought of and gets done.

Our award recipient joined the club only a couple of years ago, after being away from ham radio for several decades

Like the weather in March, he came in like a lion! There was no holding this guy back. He jumped into the operator training program and quickly mastered the techniques. He then started his own "Get Your Feet Wet" program to pass on what he had learned to the new and less experienced members in a no pressure, no expectations

environment. The idea being to enable them to judge whether or not they would be interested in the formal operator training program.

He also joined the Field Day planning team, willingly assumed a leadership position and whipped the team into shape.

There are many other things I could say about this person:

- he is a great mentor and role model for the new members
- he is generous with his time in giving to the club and to amateur radio in general, and
- not only is he willing to take the lead with demanding projects, he has the management skills and diplomacy to make them happen

It is a rare privilege to have someone like this person on our team - yes, you all know by now who I am talking about - Brett Garrett, VE7GM



The fact that he declined to be considered for this award tells you something about Brett. It isn't often that you get modesty and leadership in the same package.

As should now be obvious, we have chosen to ignore his refusal.

Brett, could you please come out from wherever you're hiding and accept this well deserved award?

*Jim (Rt) presents the award to Brett (Lt)*



## Rob Gilchrist VE7CZV

Presented by Bill Little VA7ZBL

Here is a long-time member who can be counted on to contribute to the betterment of the club at every opportunity.

Despite a serious handicap, as he is blind, this man volunteers whenever a radio operator is needed at an exercise or club event. He doesn't let a small thing like vision impairment stop him from doing things - very difficult things I might add.

Despite his handicap, he knows more about radios than many of our members and can tell you how to program it and use it. Don't ask me how he does it. Rob is always cheerful, positive and good natured. Of course we're referring to Rob Gilchrist VE7CZV.

Rob is the familiar voice heard on the repeater more than anyone else and we come to rely on Rob to keep tabs on the repeater activity, report on problems and be the welcoming voice to other hams who just want to chat. Not only does he take the net control job once a month, but he has taken on the job of net manager, making sure that someone is there on their assigned night or finding a replacement on other occasions.

Rob has been a Director for a couple of years and recently volunteered to be our Secretary. Also an active member of SEPAR, he is at the centre of the action when there is a training session, simulated emergency or traffic to be passed.

Such is his enthusiasm, that he encouraged his wife Elizabeth VA7ELA, to recently get her license and become active.



*Rob VE7CZV was presented with an MFJ auto-tuner as gift of the ABC "Breakfast Club" We wish you good DX, Rob.*



*Bill (Lt) presents the award to Rob, assisted by wife Elizabeth*





## Jinty Reid VA7JMR

Presented by Brett Garrett VE7GM

Everyone knows how difficult it is to get volunteers to take on club projects. This is true of almost every organization. It is especially difficult to find the leaders who will take on the entire task. I call these folks the designated worriers, who fret and make sure that every detail is taken care of.

This kind of person is distinct from the volunteer who just does as he/she is asked. Someone else has to do all the organizing and worrying about details, and we have a such a person in our membership.

She came on the scene a couple of years ago, after taking the basic course and getting her license. This lady has an extremely busy life and is involved in many activities, through her church, choir, and yes, both SARC and SEPAR. Despite this, she is a willing volunteer.

Every month without fail, she interviews and writes up in an entertaining fashion one of the most popular features of the Communicator - the "Radio-Active" member profile.

She comes out to the Cruise-in and is one of our most effective sellers of raffle tickets and in 2 of the 3 last years, she has sold a winning ticket.

She joined the operator training program some time ago and quickly became proficient contest operator. She then took on the job of once-a-month net control for SEPAR and SARC.

She then agreed to run the FD station for new operators.

For 2 years in a row, she has organized our Christmas parties, including this one.

I am talking about Jinty Reid VA7JMR... Jinty we need more members just like you. Please come forward and receive this award.



*Brett (Rt) presents the award to Jinty*

## *More of the SARC Christmas Party...*



## **SARC Contest Calendar for 2013/2014**

<b>Dates</b>	<b>Contest</b>	<b>Modes</b>
Jan 4-5	ARRL Roundup	RTTY
Jan 18-19	North American QSO Party	SSB
Feb 1-2	BC QSO Party	SSB, RTTY & CW
Feb 8-9	CQ WW WPX Contest	RTTY
Feb 22-23	North American QSO Party	RTTY
Mar 29-30	CQ WW WPX Contest	SSB
May 24-25	CQ WW WPX Contest	CW
June 28-29	ARRL Field Day	



## SEPAR Report

Fred Orsetti VE7IO

### BC/Yukon Simulated Emergency Test November 30th 2013



#### Conducted by ARES Field Services Section Emergency Coordinator Fred VE7IO

All Amateur Radio Clubs and emergency groups were invited to participate in a simulated emergency test (SET). Announcements were made on the BC Public Service Net, the BC Yukon Traffic Net as well as several VHF nets one month in advance of the exercise. In addition all groups that had participated in previous SET exercises were invited to participate.

The primary goal of this exercise was to increase the proficiency, speed and accuracy of our operators when passing traffic using the National Traffic System NTS. The exercise commenced at 09:00 local time then ran until approximately 14:00 and consisted of four tasks.

#### TASK ONE (Round Robin Relay):

Stations were asked to format two NTS messages addressed to themselves, with full address and phone numbers. The message text must start with the phrase "test message". The remaining portion of the NTS message was from text supplied from the participating station. The message text could have been emergency related or famous quotes. All stations were reminded to keep messages as brief and simple as possible. In addition to formatting messages and placing them into the "round robin circuit"

Stations were responsible for coordinating the reception of messages coming from the station before them. All sending and receiving was coordinated through a net control station.

The purpose of the Round Robin Relay was to evaluate the entire group's ability to put two NTS messages out onto the circuit and receive them all back at the end of the day error free.

**TASK TWO (NTS 3rd Party Message):** was performed simultaneously with Task #1.

Each station was to send an ARL NTS 3rd party message. Each message required a phone number in order that the receiving station would be able to deliver the message. The station delivering the message was directed to send confirmation of delivery back to the originating station. The 3rd party message was sent directly to the delivering

station (station to make the phone call) and was not part of the "round robin messages".

#### SOME GUIDELINES FOR THE 3rd PARTY MESSAGE:

1. All stations were asked have a copy of the ARL Numbered Text Messages at their station.
2. Handling instructions for the third party message should be HXC. The confirmation of message delivery should be done with the ARL forty seven numbered Text.
3. All messages should have the word "test" in the precedence and at the start and finish of the text

#### TASK THREE (To be executed by Net Control):

In this part of the exercise all field stations were asked to cease passing traffic through the round-robin and send all pending traffic back to the originating stations.

#### TASK FOUR (POST EVENT ANALYSIS/SCORING):

Each station was asked to report to net control with the following information:

1. Are you using emergency power?
2. Confirm if your third party traffic was delivered and whether or not you got confirmation of delivery.
3. Number of messages originated.
4. Number of messages relayed.
5. Number of messages received back without error.
6. Number of messages received back with error(s).

The accompanying chart shows the SET exercise results.

There were some operational issues that need to be addressed for the next exercise to be scheduled in March 2014. For stations outside the Metro Vancouver area the use of HF clearly worked best. We did use IRLP and Winlink both of these modes rely on the Internet and are less than desirable when considering emergency communications. Both IRLP and Winlink worked very well but for future SET exercises we plan to minimize or eliminate the use of the Internet. Peer to Peer digital seems to be the best option however to accomplish this, HF may be a requirement.



SET Exercise Results										
			# AT STATION	EM POWER	3RD PARTY SENT	CONFRM DELIVERY	# MSGS ORIG	# MSGS RELAYED	BACK NO ERRORS	BACK WITH ERRORS
VE7HME	SURREY	TX	5	NO	YES	NO	2	11	2	0
VE7GN	GABRIOLA	RX/TX	1	NO	NO	NO	2	11		2
VY1RM	YUKON	RX/TX								
VE7SWF	SW PREOC	RX/TX	2	NO	YES	NO	3	12	1	0
VA7QQ	Penticton	RX/TX	2	NO	NO	NO	2	12	0	1
VA7ARE	CVRD	RX/TX	3	YES	YES	YES	3	13	1	0
VE7CGE	BURNABY	RX/TX	3	NO	YES	NO	2	21	0	2
VA7QBB	QL BEACH	RX	3	NO	RX ONLY	RX ONLY	RX ONLY	10	RX ONLY	RX ONLY
VE7PQE	PARKSVILLE	TX	6	NO	YES	YES	3	9	0	1
VE7DB	WHITE ROCK	RX/TX	7	NO	NO	NO	2	5	0	0
VE7CRT	WHITE ROCK	RX/TX	WITH DB	WITH DB	WITH DB	WITH DB	WITH DB	WITH DB	WITH DB	WITH DB
VE7DEP	N. DELTA	RX	9	YES	NO	NO	2	14	0	1
VE7SUN	S. DELTA	TX	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
VE7FWM	LANGLEY	RX/TX	12	NO	YES	YES	3	14	0	2
VE7MOV	SURREY	RX	5	YES	YES	NO	3	12	0	0
Totals			58	3	7	3	27	144	4	9

In summary the exercise did what exercises are supposed to do and that is provide an opportunity to evaluate our ability to deliver on commitments made to the Province and the Community by amateur radio emergency

organizations. Most certainly the SET at the end of November did just that and everyone is encouraged to participate in the March SET.



## Radio-Active

John MacFarlane VE7AXU

## Introducing Dennis Jackson VE7DGJ

A ham licenced since 2000 Dennis Jackson is an active member of the club. Dennis is one of the friendliest regulars at the Friday morning breakfast meetings at the ABC Restaurant on Scott Road. He loves being a ham and it shows in his positive and sunny disposition. Dennis was a longshoreman in his working life and moved a lot of coal and containers around at Roberts Bank - particularly at the coal port.

Originally influenced by a friend, Bernie Bricklebank in Surrey, Dennis passed the exam and became active in the White Rock Amateur Radio Club. At his first meeting he heard a presentation by Fred Orsetti (VE7IO) which influenced him and he still has vivid memories of Fred's talk. His close ham friends Bill Little and Don Hamilton keep his interests well fueled. Bill recruited Dennis into the Surrey Club and he is active in the Abbotsford and White Rock clubs as well.

Dennis is active on various repeaters in the region and loves to have a rag chew whenever possible. He is often seen carrying an HT so he's usually ready to jump in and participate. He has the equipment in this shack to do HF even though he lives in an apartment building. A Tarheel vertical antenna on the roof allows him to occasionally check into the 80m BC Public Service net - although he admits he's not as active on HF as he once was - antennas are still a bit limiting for him. He uses a Kenwood TS-570 - and looks forward to experimenting with a new antenna in the coming months.

He spends most winters down south - and a VHF/UHF ICOM unit in his car and an HT for exploring he finds to be invaluable assets to a good vacation whether in the USA or elsewhere in Canada. He likes to check into the local repeater wherever he is - just calling with his call sign and a brief explanation of who he is and why he's in the area. He says almost invariably he gets an invitation to attend a breakfast or club meeting with friendly local hams.

He relates that on a 2003 trip in eastern Canada he used the handheld to contact surrey Club members via an amateur radio Satellite connection and the local

repeaters. He laments that this technology is no longer available to amateurs - but takes advantage of newer technologies to do the same thing.

Hams also notice his British

Columbia ham licence plate and approach him in restaurants or while he's still at the wheel. He feels it's one of the greatest social assets he's got when he's travelling. He's struck up a number of friendships with US hams that he can follow up each year when he's down south. In the summers he visits the Penticton area and is a regular at the ham breakfast meetings there as well. He says that another benefit is getting local driving advice, particularly when traffic is bogged down or closed during emergencies on the Interstate Highways. Local American hams (some of whom are professional drivers) suggest workarounds which move him quickly while other drivers just wait.

Dennis has an ICOM 2820 (with D-star) in the car, and carries an ICOM 51 or ICOM 91AD (both with D-star). He is a fan of D-star and will explain the benefits if you ask. He is active in using D-star and has had a number of interesting experiences. It's a new technology and Dennis has mastered its use.

Dennis brings all the qualities that make a good ham and a great asset to any ham club. He's friendly and positive - and always ready to help others and to support the Club. Because the club has a number of members like him it makes membership a delight and a great social asset.

*~ John MacFarlane VE7AXU standing in for regular contributor Jinty Reid while she recuperates. We wish her a speedy recovery—Ed*

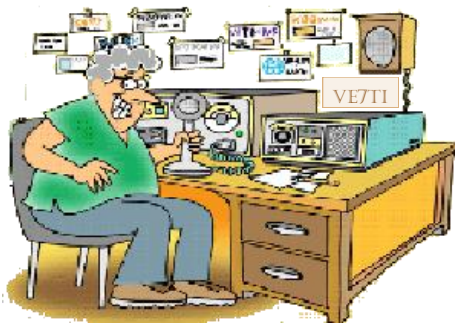




# The SARC Calendar ...places to be in Surrey for Amateur Radio in the month ahead

January 2014						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
29	30	31	1	2	3	4
<p>For details on all SARC events, go to <a href="http://ve7sar.net">ve7sar.net</a></p> <p>For details on all SEPARS events, go to <a href="http://separ.shutterfly.com/calendar">separ.shutterfly.com/calendar</a></p>					Weekly SARC Breakfast 8:00 Kalmar Restaurant King George Blvd at 81 <sup>st</sup> Ave.	Contest: ARRL RTTY RoundUp (VE7SAR Supported Event)
5	6	7	8	9	10	11
Contest: ARRL RTTY RoundUp (VE7SAR Supported Event)		SEPAR NET 7:30 SARC NET 8:00	SARC General Meeting		Weekly SARC Breakfast 8:00 Kalmar Restaurant King George Blvd at 81 <sup>st</sup> Ave.	Contest: NA QSO Party (CW)
12	13	14	15	16	17	18
Contest: NA QSO Party (CW)		SEPAR NET 7:30 SARC NET 8:00			Weekly SARC Breakfast 8:00 Kalmar Restaurant King George Blvd at 81 <sup>st</sup> Ave.	Contest: NA QSO Party (SSB)
19	20	21	22	23	24	25
Contest: NA QSO Party (SSB)		SEPAR NET 7:30 SARC NET 8:00	SARC Exec Meeting		Weekly SARC Breakfast 8:00 Kalmar Restaurant King George Blvd at 81 <sup>st</sup> Ave.	Contest: BARTG RTTY Sprint
26	27	28	29	30	31	1
Contest: BARTG RTTY Sprint		SEPAR NET 7:30 SARC NET 8:00			Weekly SARC Breakfast 8:00 Kalmar Restaurant King George Blvd at 81 <sup>st</sup> Ave.	

Contest Details: <http://hornucopia.com/contestcal/contestcal.html>



## QRM

...from the Editor's shack

*Do you have a photo or bit of club news to share?  
Something to sell or something you are looking for?  
Email it to [SARCcommunicator@outlook.com](mailto:SARCcommunicator@outlook.com) for inclusion in this column.*

### For the January SARC Meeting

Feind Hört Mit ((The] enemy listens in) is the sub-title of Adam Farson/VA7OJ's Jan. 8th presentation to SARC. He will be describing German WW2 radio component and packaging technology, design features, and typical



Above: Interior view, showing tuning dial  
Left: Side view. Note tuning dial window

equipment used by the Luftwaffe, German Service and Wehrmacht including some innovations which were not matched in sophistication by the Allied Forces until after WW2. Many early German advances in component, circuit and system design are still in use today, nearly 7 decades

later. Those who admire a superior standard of workmanship will appreciate the engineering skills of the German military as displayed by Adam's photos and descriptions. Adam will also cover the following areas:

- Component and packaging technology; typical components
- Design features: Frequency stability & repeatability, maintainability
- Equipment examples: FuG 10 MF/HF airborne communications system; Telefunken E52 'Köln' HF receiver; and the 'Dorette' portable VHF infantry radio set.

You won't want to miss this fascinating presentation coming in the New Year.

#### Capsule Bio - Adam M. Farson VA7OJ/AB4OJ

I was born in the UK, and raised and educated in South Africa. After earning a BSEE at the University of Cape Town, I worked for Racal in South Africa from 1964 to 1967 as an RF design engineer. I was involved in some interesting, advanced projects - a VHF FM/SSB tactical

ground radio system for the Ministry of Defence, and solid-state manpack and mobile HF transceivers.

I emigrated from South Africa in 1967, then spent 3 years at CERN as an RF design engineer, working on a modulation system for a 10kW 9.5 MHz RF power generator feeding a proton accelerator. That served as the thesis for my MSEE (University of Cape Town, 1971). After that, I spent 4 years in the commercial satcom field as a systems engineer on various international projects.

Next, I moved to the wireline telecom field as a switching systems engineer, working on public and private voice-data switching systems. I was based in Canada and subsequently in the US, and also worked in Japan and Germany.

I retired at the end of 1999, and moved to BC for family reasons. In my retirement years, I enjoy HF operating from my home station, RF test and measurement (including lab testing of newly-released radios) and travel. I am also a licensed radio amateur (since 1962) with the Canadian Advanced Certificate (VA7OJ) and the US Extra Class Licence (AB4OJ).

### Free CPR Training

Courtesy of Surrey Fire Services, a Cardio-Pulmonary Resuscitation (CPR) course has been arranged for SARC members and spouses from 9 am to 1 pm on Saturday Feb. 1<sup>st</sup>. Location and further details to be provided. There will be no charge for this course and certificates will be issued.

A maximum of 30 persons can be accommodated so if you wish to attend, we have to cut it off, after the first 30 I hear from.

Send an email to [brodiejb@shaw.ca](mailto:brodiejb@shaw.ca) to hold a spot(s) for yourself (and spouse if desired). A few of you have already made this known to me.

If a larger number than 30 wish to take the course, possibly another session could be scheduled.





## Page 13—News You Can Lose

### The Lighter Side of Amateur Radio

#### The Dumbest Thing I've Ever Done

Give yourself a shock? Let the smoke escape from a circuit component? We've all done some dumb things, whether related to the hobby or not. The SARC Exec is willing to donate a prize for the story of the dumbest thing a member has ever done.

You may submit your entry to President John Brodie, who has been sworn to keep the identity of the contributor a secret. The anonymous stories will be reviewed by your Exec and will be published in upcoming Communicators.

So... c'mon and don't be shy. Send your blooper to [va7xb@rac.ca](mailto:va7xb@rac.ca)



#### For Sale

Kenwood D-710A mobile, brand new in box,  
never used \$500.00Contact  
John Horahan VA7DFA

Call 604-318-4704

Or email: [johnhorahan@gmail.com](mailto:johnhorahan@gmail.com)

Do You Remember?

#### 1944 Allied Radio Catalog



# HYLON

## RADIO TUBES

**the reason for Hylon popularity**

The ever increasing demand for Hylon tubes is the natural result of superior design, high manufacturing ideals and numerous rigid inspections before release. The latest type of automatic machinery and test equipment together with the finest grades of filament wire and other tube material permits production of a tube of highest quality, uniform characteristics and long life.

**X 226 Amplifier**  
An AC Tube for use in all modern radio sets for radio frequency and a d.c. frequency amplification. Draws 1.05 amp. at 1 1/2 volts with plate voltage of 90-180 volts.  
No. 189. List, \$1.75.  
**YOUR PRICE \$1.51**

**TYPE X 245 Power Amplifier**  
A power amplifier of highest quality representing the latest development in amplifying tubes. Produces a smooth powerful tone and handles the lowest notes without blurring or distorting. Widely used in receivers using push pull amplification and dynamic speakers.  
No. 189. List, \$3.50.  
**YOUR PRICE \$1.45**

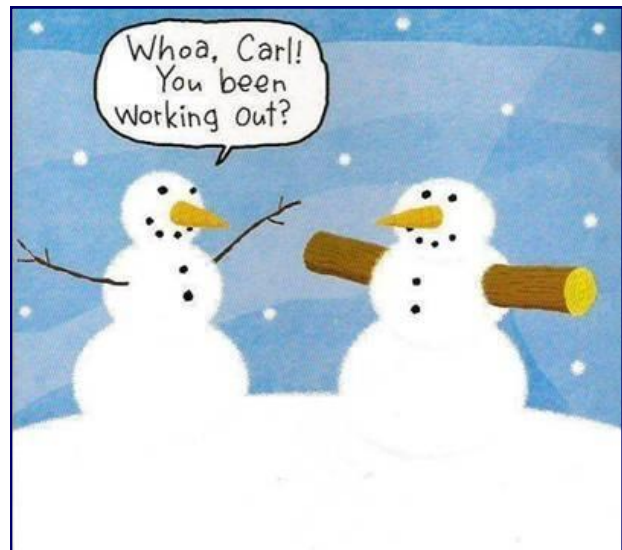
**X-201 A Detector and Amplifier**  
Detector and amplifier. Used in DC sets as radio and audio amplifier. Filament voltage, 5; filament current, .35 amp.; plate 115 volts maximum. Amplification constant 8-9.  
No. 200. List, \$1.25.  
**YOUR PRICE \$1.33**

Order a set now. You will be well satisfied. Hylon quality will demonstrate itself in any set.

**Less Than Jobbers' Wholesale Prices**

HYLON offers a complete line of quality tubes priced below jobbers' wholesale prices. **MAKE A PROFIT ON YOUR TUBE SALES.** The cleanness, tremendous volume and extreme sensitivity. Microphonic noises are practically eliminated because of the rigid method of mounting the tube elements. Made in all types. Try them.

<p><b>X-171 A Power Amplifier</b> No. 191. List, \$2.25. <b>YOUR PRICE \$1.59</b></p>	<p><b>X-245 New Power Amplifier</b> No. 189. List, \$3.50. <b>YOUR PRICE \$1.45</b></p>	<p><b>Y-224 A. C. Screen Grid Amplifier</b> The new high gain R. F. Amplifier and Power Detector. Non-oscillating in shielded circuits. A.C. heater type filaments. Built to quality standards. No. 187. List, \$4.00. <b>YOUR PRICE \$1.79</b></p>	<p><b>X-199 Dry Cell Detector and Amplifier</b> No. 201. List, \$2.50. <b>YOUR PRICE \$1.69</b></p>
<p><b>X-280 Rectifier</b> An improved full wave rectifier with coated ribbon filament. Supplies constant current for all A.C. sets. No. 192. List, \$3.00. <b>YOUR PRICE \$1.83</b></p>	<p><b>Y-227 A. C. Detector-Amplifier</b> Hummless operation. Has new type heater element. Popularly used as A. C. detector also efficient as amplifier in the latest receivers. Accurately built. Elements are firmly suspended. No. 190. List, \$2.50. <b>YOUR PRICE \$1.73</b></p>	<p><b>X-120 Dry Cell Amplifier</b> A power amplifier tube to be used in the last stage of sets using 199 tubes. Plate voltage, 115. No. 196. List, \$3.00. <b>YOUR PRICE \$1.73</b></p>	<p><b>X-201 A Detector and Amplifier</b> No. 200. List, \$1.25. <b>YOUR PRICE \$1.33</b></p>
<p><b>X-200-A Super Detector</b> An extra super-sensitive detector tube used in place of 301-A for greater sensitivity. No. 202. List, \$4.00. <b>YOUR PRICE \$1.89</b></p>	<p><b>X-226 A. C. Amplifier.</b> General purpose A.C. Amplifier. Long life. Rugged construction. For I. F. and Audio circuits. No. 189. List, \$1.75. <b>YOUR PRICE \$1.51</b></p>	<p><b>X-112-A Power Amplifier</b> Used as a power amplifier tube in last stage. Has higher amplification factor than 171-A but lower power output. Plate voltage, 180. No. 203. List, \$2.25. <b>YOUR PRICE \$1.59</b></p>	





## Tech Talk

John Schouten VE7TI

### Restoring A Rusty Old Tower

#### A BIG Project!

Three years ago I received a free tower and rotator. I'll write about the rotator in another installment but I've since discovered that some 'free' ham gear is like being given a free dog... you have to be aware of the hidden costs.

I had never had a tower but always wanted one. I'd been satisfied with my Carolina Windom, an off-centre fed dipole at 25 feet off the ground, that let me use most HF bands right up to 80m. It served me well, and still does but greater involvement in contesting and the desire to move up to a more directional antenna encouraged me to make the move.

Fortunately I have a wife who is also a ham, though not particularly active, but she knows the thrill I get when working a new country or breaking through a pile-up. She was supportive in my quest. Coincidentally I also had to replace the deck on our 30 year-old house. That provided another incentive to get the project started and find the right location. Our old laundry line was accessible from the deck at a corner of the house. The new deck, with glass panels around it would no longer allow this so the new tower would have to do double-duty as the anchor for the clothesline as well. I decided that it would be a light-duty tower as I didn't have the space for a full-size tower, and I wanted to keep peace with my neighbours.

I spread the word among my fellow club members that I was looking. Pretty soon an offer came in of five ten-foot sections of light duty tower. I picked them up and it was immediately evident that some work would be needed before they would be safe and usable. Thick rust had eaten though much off the galvanized surface. Several

of the cross-member welds had broken and one section was noticeably bent. I knew my wife wouldn't be pleased.

Over the next several day I spent time washing down my new acquisition, which had evidently spent time behind someone's shed, judging by the weeds, caked mud and dead critters in and outside the tubing. I also spent some Internet time researching whether I could revitalize this tower and how to go about it.

My daughter-in-law manages a paint store and was able to provide me with some technical advice on surface preparation and coatings. I knew I would have to paint the sections for my wife to accept them right outside her kitchen window. Colour would also be a factor.

I bought two brass wire wheels and some emery paper and set to work to clean off as much loose rust as I could with my power drill. It worked well and a day later I was done. Based on my Internet findings, and helpful reviews by previous users, I tried three products to tackle the remaining rust. From left to right on the adjoining photo they were Permatex brand 'Rust Dissolving Gel', 'Evapo-Rust' by Rust-stop Canada, and Rust Check brand 'Rust Converter'. All were applied according to the provided directions and they performed their intended function. The gel, being thicker, clung to the parts better but was much slower and required a lot of re-coating to keep working. The other two products were thinner and more difficult to keep in place, but they produced faster results. If these were small pieces that could be submerged it would be no contest but keeping to a short section at a time and using a paint brush to keep the area wet with solution clearly showed the Evapo-Rust product



Above: The tools for the initial prep work; and below, the chemical; rust removers





to be the most suitable, and the fastest. It also appears to be the most environmentally friendly of the three though I wouldn't recommend doing this job on your lawn, as I started to do. Yes, the grass did eventually grow back.



The surface was now free of rust and, after another scrub, was ready for inspection. I looked closely at each crosstie and at every weld. Suspicious ones were marked. Several were obviously cracked or already split. With the assistance of Fred Orsetti VE7IO, the welds were repaired. I was ready for paint!

I would have used an oil based primer and top-coat but my expert advised me

against it and she was correct. According to the product sheets for such coatings, it is not recommended that you use an oil based product on galvanized surfaces. The paint will release and peel off after a time—and I didn't fancy the thought of doing this again in a couple of years. There are special coatings available in a spray can specifically for galvanized metal but they are quite expensive with small coverage, exacerbated by the necessity to get inside and out and into all the nooks and crannies around the welds. I decided a brush was the better applicator for that job.



We (read in wife-approval mandatory) decided the least noticeable colour on our wooded lot would be a camouflage green. As a result of my 'colour-Googling' I had actually suggested a multi-colour camo paint scheme

but that was vetoed as being too 'military looking', and so the appropriate latex primer and top-coat were tinted. It took exactly one litre each of primer and top coat to paint the five sections twice, with extra coatings on the welds. I used an air sprayer on the legs for the final coat.

Next came even tougher work. I had to remove a section of my cement patio to make the appropriate foundation and dig a big hole. There were brackets available that could be surface mounted but I'm a 'belt and suspenders' kind of guy and I wanted this thing in a block of concrete. If guys are not used, the tower manufacturer recommends fastening a section to the house as high up as possible, in my case that was just near the top of the 2nd section. I visited my local scrap yard and purchased some heavy-duty angle aluminum by the pound. I cut pieces to make an equilateral triangle and bolted one to the top plate of the house, running two arms to adjacent tower legs where they were secured by U-bolts. It's steady as a rock. I used stainless steel hardware for all the section to section connectors in case I ever want (or have to) take it apart. That time is approaching as I have completed a rebuild of a rotator and HF yagi that will go up in the spring.



*Flower pots at each level almost hides the tower below the roof line . Note the aluminum angle braces and the clothesline attached.*

It has now been two years plus and the tower shows no signs of either rust or paint failure. It was a lot of effort but I'm pleased I did it. Even with my Carolina Windom centered at the top of the tower, much higher than before, I'm getting much more activity across all the bands.

The sections above the roof blend in nicely with the trees. The final touch was to place flower baskets on the rungs at each level. We now refer to it as the 'Tower of Flower' and surprise... the neighbours even say it looks good.



## RAC News

### Radio Amateurs of Canada

#### RAC President's Report

*November 2013*

During an email exchange with a ham in British Columbia, I stated "I need to make plans to get out to BC. I haven't been there in years and I have never been there as RAC President". Our BC/Yukon Regional Director Bill Gipps VE7XS emailed me and asked "did you mean that?" and Bill and Geoff's Excellent BC Adventure was born.

Bill reached out to clubs throughout the Lower Mainland and Vancouver Island and asked whether there would be any interest in the two of us coming out to their clubs and making a presentation. The answer was yes... in fact there was a great deal of interest in hearing what RAC was up to. This would also be a good time to promote our 2014 AGM which will be in New Westminster, BC at the invitation of the Orca DX and Contest Club and in conjunction with the Pacific North West DX Conference July 22 to 25th 2014.

(See <http://orcadxccc.org/vancouver2014/home.html>).

The tour began with my arrival at Abbotsford airport on November 1st, being warmly greeted by Langley Amateur Radio Association Past President, Al Munnik (VA7MP). That evening, I gave the first, of many speeches that week, to the Burnaby Amateur Radio Club. The speech contained highlights of the recent AGM Report, which can be found on our website, as well as in the Nov-Dec TCA.

The next morning, Bill and I attended breakfast with numerous local Amateur operators, at their regular Saturday 6:30 a.m. meeting. It was followed on Sunday by the Maple Ridge Club's breakfast and Swap Meet and an afternoon visit to the Coquitlam Amateur Radio Club, which made for a pleasant week-end talking radio and RAC.

The following few days comprised of visits and speeches to the Chilliwack ARC, Vector ARC (including a tour of the Vancouver EOC), Abbotsford ARC, North Shore ARC and a tour of their EOC. On Friday, a ferry ride to Vancouver Island and a meeting was held in Victoria with EMBC (Emergency Management British Columbia) including a tour of their facility. EMBC, by the way reiterated their support for the 60 metre allocation, which was originally advanced by RAC.

The meeting with EMBC and earlier with the Vancouver EOC staff was a real education... each municipality has a sophisticated EOC and most have an associated radio club operation. There are provincial EOCs across the province. BC faces a wide range of potential threats... earthquakes, volcanos, tsunamis, fire, and severe weather. Apparently a significant number of people get lost in beautiful and rugged BC and they have a large and sophisticated Search and Rescue organization. Hams are involved across the province providing support to their communities.

As a closing event, the Cowichan Valley Amateur Radio Society hosted Bill and I, and invited over twelve clubs to attend a Saturday morning session in Duncan BC. We did a nice dinner the night before with the local club executive. The CVARS President Dale Jones had stepped up to the task of organizing that Saturday meeting. This was a significant logistical task, as amateurs from all over Vancouver Island attended. I announced that the 2014 RAC AGM will take place the end of July, 2014 in New Westminster (a suburb of Vancouver), at the same time as the Pacific North West DX Conference, hosted by the local Orca DX and Contest Club.

A big thank you goes out to all the various club volunteers who made this trip such a success, and a special thanks to Bill Gipps (VE7XS) for inviting me and arranging the itinerary, and to his wife Judy for the hospitality they personally extended. We weren't able to visit everyone, but we certainly enjoyed those we did get to meet.

Trips such as these bring RAC closer to the grassroots membership and offers all a very unique opportunity. My trip to BC affirmed what I already knew - that BC has a large, competent, and sophisticated amateur population. The two things that I like the most are competence and character and by character I mean good character.

There will likely be more of these trips, to different parts of Canada, going forward as we believe that there is absolute value in doing these visits to local amateurs across Canada.

Recently I received an email from an individual that felt that he was being excluded from club activities due to his lack of mobility and physical issues. He noted that there were few supports for persons with physical disabilities and felt excluded from ham radio organizations due to his disabilities.



One of the many things that attracted me to ham radio was amateur radio's inherent inclusiveness. I know senior hams (some very senior ones!), young hams (less than ten years old), blind hams, deaf hams, and there can be mute hams, and race, religion and sexual preferences are irrelevant to the operation of radio equipment. In my view the only prerequisite regarding participation should be competence and character. Ham radio should be a civil pursuit open and supportive to any ham and by civil I mean practiced with civility. I have heard stories of new hams being frozen out of nets or poked fun at for "newbie" errors instead of that error being treated as a "teaching moment". Now the law of human nature has not been repealed and we hams are as human as anyone else. We must strive to grow this great activity by being open to all and being supportive. Reach out and help a newbie, support someone that needs some help due to some "incapacity"... help grow new hams by continuing to make ham radio accessible.

There was a recent email asking that we stop linking our website to a particular club website because they were linked to a blog that made unfortunate remarks about individuals. I was sympathetic but RAC cannot police the internet... and also blogs are almost invariably just one man's opinion and usually does not represent the formal view of any organization. It can be frustrating (but surely not surprising!) that inaccurate information can be found on the internet and that a blog may contain inaccuracies.

I welcome our new Treasurer Dorothy Brown. I am pleased that she has agreed to join our team. We beat the fiscal monster in 2012 but we need to keep a close eye on it to ensure it stays moribund and Ms. Brown will be helping. She has a proven track record, professional credentials and comes well recommended.

Until next time...

*Geoff VE4BAW*  
*RAC president*

## Expecting QSL Cards?

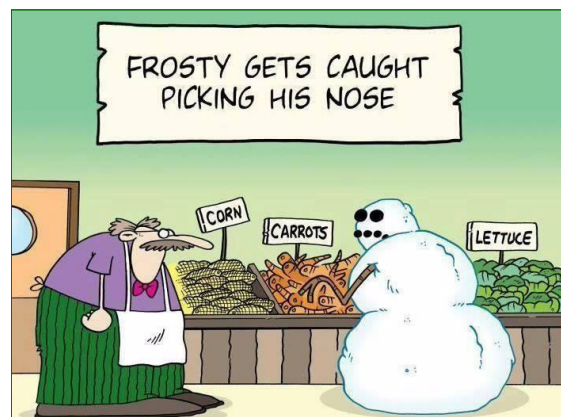
Are you expecting QSL cards via the in-coming bureau? If so, and you are a regular attendee at the Friday morning SARC breakfast you can pick them up there. Alternatively if you may arrange to collect them at SARC monthly meetings. All you have to do is advise QSL Bureau Manager, Ken Clarke VE7BC, that one or the other is your choice of pickup location. Ken can be reached at: [kenjclarke@shaw.ca](mailto:kenjclarke@shaw.ca) or [ve7bc@gmail.com](mailto:ve7bc@gmail.com).

## RAC Bulletin 2013-041E - 0-30 MHz Band Planning Committee Announcement 2013-12-11

Al Penney, VO1NO has agreed to chair RAC's 0-30 MHz Band Planning Committee. The previous chair, Jim Fisher, VE1JF has retired but will continue to serve the BPC for a time as Past Chair and has pledged his active support to a successful transition. Jim had joined the BPC when it was the HF Band Planning Committee and became chair upon the retirement of Bob Nash, VE3KZ. Jim saw the committee through very active intra-Canada band planning and intense negotiations with Region 2 on revisions to 40M and general updates, and its expansion to 0-30 MHz, as well as the development of RAC's current proposals for 60 M privileges. Other continuing committee members include Scott Wood VE1QD, Mel Martin VE2DC, Don Moman VE6YJ, and Frank Vanderzande VE7AV.

Al was first licensed in 1977. He has been active on all bands from 160M to microwave, and enjoys DX'peditions for IOTA and VHF/UHF contests. He is a past president of the VE2CMR Club, Halifax Amateur Radio Club, Pikes Peak Radio Amateur Association in Colorado Springs, and the West Carleton Amateur Radio Club in Ottawa. He is currently President of the Greenwood Amateur Radio Club in Nova Scotia, having recently moved to the area after retiring from the Royal Canadian Navy following a 35 year career. Now that he has more free time, he intends to be much more active on the air again!

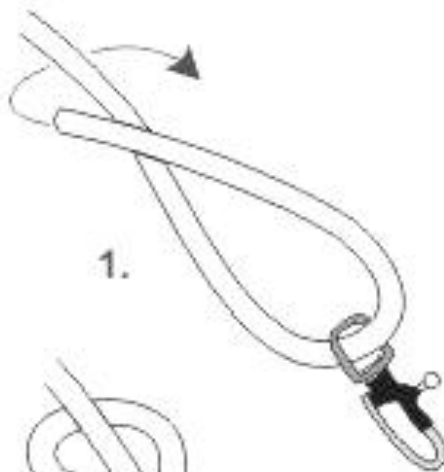
*George Gorsline, VE3YV*  
*International Affairs Officer*



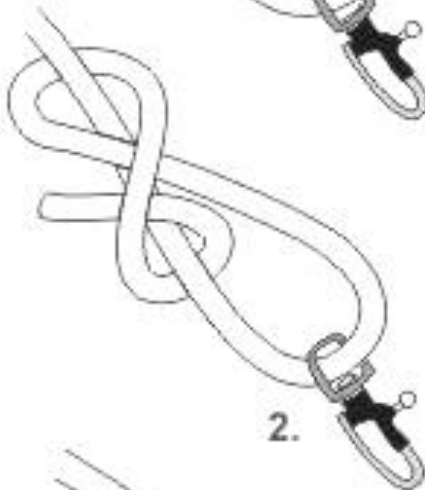
*Knots are used frequently in our hobby. From securing loads to securing antennas, a knowledge of some basic knots is very valuable. We are considering a General Meeting session later in the season to see some knots and their application demonstrated. In the meantime, we'll feature some common knots for you to practice. This month...*

## The Buntline Hitch

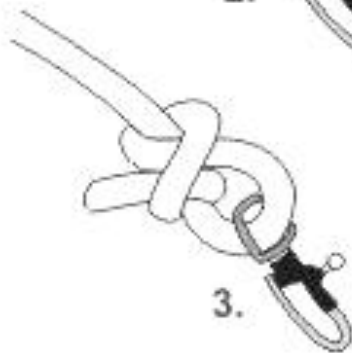
Use this knot to fasten items such as snaps and rings to rope or cord. It forms a small, net and very reliable knot. Not to be used however for tying a climbing rope.



Pass end of rope through shackle, then back up across standing part. Make a turn around standing line, forming a loop with the shackle at the base of the loop.



Bring free end across tops of both parts of loop. Make a turn around standing part of loop, making sure free end exits between itself and the standing part of loop.



Pull knot tight down onto shackle.

### SEPAR Meetings

Third Thursday of each month starting at 1900 hrs

Fourth Saturday of each month starting at 0900 hrs

Location and event schedule can be found at  
[separ.shutterfly.com](http://separ.shutterfly.com) — click on the calendar tab



## Q and A:

### Can Hams with a Basic Licence Program and Use Land Service Transceivers?

A Question was recently raised about the required licencing level to program and use transceivers manufactured for non-Ham (commercial) use. These are also known as land service radios. The opinion put forward is that there should be no issue with a Basic with Honours (or even a Basic only) qualified amateur from self programming and using such land service radios on the VHF or UHF amateur bands.

As far as the rules are concerned, we are simply dealing with what is said in RIC 3, section 1.4 "Privileges and Restrictions". And there it says regarding "Basic Qualification":

<http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf01636.html#gen13> and  
<http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf01636.html#note1>

Can operate all station equipment, except for "home-made" transmitters. Footnote 1 says:

"Build" in the context of the Basic Certificate is limited to the assembly of commercially available transmitter kits of professional design.

Obviously, the prohibition stated above for the Basic amateur not being allowed to build transmitting equipment does not apply to the context of programming radios for operating on specific frequencies (or modes) especially if such programming is part of the inherent design of the product.

For example, the Tait radios are designed for the land mobile service and must comply RSS 119 to be marketed in Canada for that service. This is a much higher standard than Amateur equipment. Actually, in Canada, amateur band radios do not need any IC certification although we often see Yaesu radios certified up RSS 215 (analogue scanner receivers. In the States, even amateur radio equipment must be certified by the FCC before it can be legally sold.

Most often nowadays, VHF land mobile service radios such as the Tait, span the entire VHF range from 138 to 174 MHz and therefore easily cover the two metre amateur band, 144 to 148 MHz. And it is certainly permissible to

program and use these radios in the amateur band providing the user is a certified amateur operating in the amateur service with a minimum of Basic qualification and communicating with other duly qualified amateurs.

Indeed, such radios could also be programmed outside the amateur band on duly authorized frequencies such as the SAR national frequency or other agencies frequencies providing written authorization is provided and providing the radio(s) in question are properly licenced either as part of a fleet or individually by Industry Canada and licenced is renewed on an annual basis. In order for radio equipment to be licenced in the land mobile service, it must be certified under RSS 119. In such cross service programming of radios, the amateur frequencies should not be included on the mobile or portable radio licence application. See RSS 119 at:

<http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf01063.html>

Now it may be, that some (older) land mobile equipment had to be hardware "hacked" into making them tune the ham band. Some equipment was designed and sold with "frequency splits"... for example, Motorola VHF radio model xyz, may have been sold to cover 136 to 150.4 MHz while another split version of the same radio covered 150.0 to 174 MHz. And sometimes, if the radio was not in the right split range for the ham band, a little hacking into the front end pre-selector or VCO or otherwise was necessary to "tune the radio" for enough performance or frequency lock for satisfactory operation in the 2 metre ham band. One may argue, I guess, that that should only be done by a technically competent "Advanced" certified ham. But clearly, that would only be a very far right interpretation of the rules. And of course, there is no such interpretation circular given to IC officials if you asked them.

Again, Basic only qualified amateurs should be perfectly within the rules to use and even program radio equipment that is inherently designed to span the entire VHF range.



*Surrey Amateur Radio Club*

# 2013.. The Year In Pictures




New contesters in the ARRL Rookie Roundup and great contest standings, two in-house swap meets, the annual fox hunt and the antenna building that went with it. The fox hunt was great, the antenna so-so but we all enjoyed building them.





Above: the best Field Day ever! Even the Mayor tried her hand in antenna launching.

The Langley Cruise-in and raffle were a success; and the repeater site problems look like they will be resolved in 2014.

*I*  *L*

**The Radio Amateur's Journal**  
Takes pleasure in awarding this Certificate of Merit to  
**VA7XB**

In Recognition of the achievement of winning the **2013**  
**World Wide WPX Contest**

for the **CANADA 7TH AREA** division for  
**1ST PLACE SSB MULTI-SINGLE**

A Total score of **118,397** points was computed on the basis of the  
number of stations worked and call sign prefixes contacted. In witness of this  
achievement, we hereby affix our signatures on this day.

*Robert K5ED* K5ED  
CO WPX Contest Director

*Ed N. W. W2VU* W2VU  
Editor, CQ

OPS: VA7AG VA7CHX VA7JMK VA7XB VE7FO VE7GK VE7TI VE7XEN #5 CANADA





## QRT...

John Brodie VA7XB

### The Months Ahead

Hope all had a good Christmas and New Year! What is coming up in 2014 you may be wondering? I'm glad you asked that question as some exciting things are planned. As usual, we have the ever-popular Foxhunt and Field Day to look forward to but also many other activities to fill the calendar in between.

#### CPR Course:

We're all getting older and never know when we may be called upon to perform CPR on a friend, family member or even stranger - or perhaps your spouse will need to perform CPR on you. With that in mind, a CPR course has been arranged courtesy of Surrey Fire Services for SARC members. It will take place between 9 am and 1 pm on Saturday Feb. 1st at the "Barge-In" (Firemens' Union Hall) at 144th St and 72nd Ave. There will be no charge for this course and certificates will be issued. A maximum of 30 persons can be accommodated so if you wish to attend, don't delay - send an email to [brodiejb@shaw.ca](mailto:brodiejb@shaw.ca) to hold a spot(s) for yourself (and spouse if desired). Those of you who have already done so do not need to respond again.

#### Operator Training/Contests:

Do you want to operate on Field Day and be part of a winning effort? Then you need to make sure that you are ready for the challenge and that means taking every opportunity between now and then to improve your operating ability. The operator training group has at least one contest scheduled for every month between now and Field Day. In January we have the ARRL RTTY Roundup and in February are three more, the Feb 1-2 BC QSO Party (SSB); Feb 8-9 CQ WW WPX Contest (RTTY); and Feb 22-23 North American QSO Party (RTTY). The full contest list is presented elsewhere in this issue.

#### Meeting Program:

Here is the meeting program for the winter and spring:  
January: Adam Farson VA7OJ presentation on German WW 2 Radio

February\*: Getting Started on HF (various presenters)

March: Mike Andrews VE7MPA presentation on "[Disaster] Lessons Learned"

April: Bob Heil is the President and CEO of Heil Sound and an active Ham as K9EID. He is also in the Rock 'n Roll Hall of Fame for his sound technology.

You may own a Heil mic or headset, products he developed specifically for the Amateur Radio community. For the past 2+ years he has hosted a weekly program via podcast (<http://twit.tv/hn>) which explores every facet of our hobby. Bob has agreed to join our meeting via Skype to tell us more about his experiences in the hobby and how to get better audio going in and coming out of your transceiver.

April (Backup program in the event Bob is not available) "Knots Everyone Should Know for Field Day"

May: Field Day Briefing

June: Annual General Meeting and election of officers. End of the 2013/2014 fiscal year.

\*The February meeting is one that particularly warrants some discussion. HF topics will be broken down into 5-10 minute segments, each presented by a different person. Topics such as: HF equipment bare basics; limited space HF antennas; coax options; connectors for coax; connectors for power; etc. If you are knowledgeable on a particular HF topic (not necessarily one of the foregoing) and would be willing to share your knowledge, please make it known to myself or other member of the Exec. as this meeting will necessarily be a team effort.

